IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	James R. H. Challenger, George P. Copeland, Arun K. Iyengar, Mark H. Linehan		
Assignee:	International Business Machines Corporation		
Title:	Method and System for Processing Multiple Fragment Requests in a Single Message		
Serial No.:	10/034,726	Filing Date:	December 19, 2001
Examiner:	Jeffrey R. Swearingen	Group Art Unit:	2145
Docket No.:	AUS920010856US1	Customer No.	65362

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PRE-APPEAL BRIEF REQUEST FOR REVIEW AND STATEMENT OF REASONS

Sir:

Applicants request review of the Final Office Action dated October 1, 2007, in the above-identified application. No amendments are being filed with the request. This request is being filed with a Notice of Appeal. The following sets forth a succinct, concise, and focused set of arguments for which the review is being requested.

CLAIM STATUS

In the Final Office Action, the Examiner rejected claims 1-10, 12-21, and 23-32, asserting that claims 1, 4-5, 8, 11, 12, 15-16, 19, 22, 23, 26-27, 30, and 33 are anticipated by U.S. Patent No. 6,345,292 to Daugherty et al.; claims 2-3, 13-14, and 24-25 are obvious over Daugherty and Official Notice; claims 6-7, 17-18, and 28-29 are obvious over Daugherty and Borenstein et al. "MIME: Mechanisms for Specifying and Describing the Format of Internet Message Bodies" ("RFC 1341"); and claims 9-10, 20-21, and 31-32 are obvious over Daugherty and U.S. Patent No. 5,987,480 to Donohue. Applicants respectfully traverse the rejections because Daugherty's disclosure -- of an architecture for rendering web pages by requesting un-cached clips one clip at a time -- does not anticipate the present invention's scheme for aggregating multiple cache requests within a single message. *See, e.g.*, Application, pages 99-104 (paragraphs 319-329). This scheme is variously recited in the claims with reference to searching the cache to determine that "a set of fragments associated with a set of source identifiers are not in the cache" and then "sending a first request message comprising the set of source identifiers" previously determined to be missing from the cache. *See*, *e.g.*, independent claims 1, 12, and 23 (emphasis added). The

underlining and boldface in the quoted claim passages are provided to emphasize that the "set of fragments" (plural) are the subject of the cache search and that a corresponding "set of source identifiers" (plural) are being sent in the first request message.

Applicants respectfully submit that the claim rejections completely ignore the specific language of the claims that recite aggregating multiple cache requests within a single message. For example, the rejection of each of the independent claims 1, 12 and 23 states that this feature is found in Daugherty at column 5, line 49 through column 6, line 13. *See*, Office Action, pp. 3-4 (March 10, 2005). However, a careful reading of the cited passage confirms that Daugherty is not disclosing the present invention's use of a sending a first request message comprising a plurality of missing (or un-cached) source identifiers to obtain a first response message comprising the set of fragments. Indeed, Daugherty makes it quite clear that any missing clips from a first cache 110 are retrieved one at a time from another (second) cache source. *See*, Daugherty, col. 6, lines 39-41 ("If a particular clip requested by the ISAPI 106 is not in the first-level cache 110, the cache 110 requests the clip from the second server 104.") (emphasis added). The one-at-a-time clip replacement scheme is *repeatedly* described in Daugherty:

> [I]f a particular clip requested by the first server 102 is not in the second-level cache 112, either, then the cache 112 requests the clip from the provider interface 114. The provider interface 114 maps the clip requested to the correct provider object. Each provider object at the second server 104 thus populates the second-level cache 112 with any of the clips not yet stored at the second-level cache 112. Therefore, the interface 114 may direct the clip request to a generic object 116, a stock object 118, or a weather object 120, in the embodiment of FIG. 2, although the invention is not necessarily so limited.
>
> Once a provider object returns the HTML clip requested to the provider interface 114, the clip is stored in the second-level cache 112, provided to and also stored in the first-level cache 110, and ultimately provided to the ISAPI 106. Therefore, when the ISAPI 106 requests an HTML clip, three situations may occur. If the cache 110 has the clip stored therein, it immediately returns the clip to the ISAPI 106. If the cache 110 does not have the clip, but the cache 112 does, then the cache 112 returns the clip to the cache 110, which stores the clip and returns it to the ISAPI 106. If neither cache has the clip, then the provider interface 114 obtains the clip from one of the provider objects, returns it to the cache 112 where the clip is stored, and the cache 112 provides it to the cache 110, which also stores the clip and returns it to the ISAPI 106.

See also, Daugherty, col. 7, lines 9-34 (emphasis added).

At best, Daugherty discloses an HTML clip caching technique whereby any clips missing from a first-level cache are retrieved one at a time from a second-level cache. With the present invention, multiple cache requests are aggregated in a single message by including a plurality of

source identifiers for uncached fragments to more efficiently assemble a set of fragments. Because Daugherty does not disclose sending a request message in which are aggregated the source identifiers for the uncached fragments, Daugherty cannot be used as an anticipatory reference against the claims. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.").

In the Final Office Action, the Examiner has not challenged the characterization of Daugherty's disclosure. Instead, the Examiner proposes an unreasonably broad and wholly unsupported definition of "set of source identifiers" and then asserts that Daugherty meets this overbroad definition. In particular, the Examiner asserts that the recitation of a "set of source identifiers" refers to a single source identifier. *See*, Final Office Action, p. 2 ("One clip is *a set of source identifiers*. The use of *a set of source identifiers* does not limit the number of identifiers to a quantity of two or more, based on set theory mathematics."). With all due respect, this is simply not a reasonable interpretation of the "set of source identifiers" term or the "set of fragments" term. As explained more fully below, when the *proper* claim interpretation is used, Daugherty simply does not meet the requirements of the claims.

1. Correct Interpretation of "Set of Fragments" And "Set of Source Identifiers"

According to the MPEP Guidelines, the pending claims must be "given their broadest reasonable interpretation consistent with the specification" during patent examination. *See*, MPEP § 2111. This was confirmed with the Federal Circuit statement that:

> The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1).

Phillips v. AWH Corp., 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005). Thus, "the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). "This means that the words of the claim must be given

their plain meaning unless the plain meaning is inconsistent with the specification." *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). "The ordinary and customary meaning of a term may be evidenced by a variety of sources, including 'the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" MPEP § 2111.01, *citing Phillips v. AWH Corp.*, 415 F.3d at 1314, 75 USPQ2d at 1327.

Based on the foregoing, Applicants submit that the "set of fragments" refers to a plurality (e.g., two or more) of "fragments" that are searched for in the cache. In similar fashion, the "set of source identifiers" refers to the corresponding plurality (e.g., two or more) of "source identifiers" that are sent in the first message request. In support of this common sense definition, Applicants note that the claim itself refers to a "fragments" (plural) and "source identifiers" (plural) so that the claim language itself clearly and explicitly recites the plurality requirement for each of these terms. The Examiner's characterization might have some persuasion if the claims recited a "source identifier set," but this is not the case, and instead Applicants have explicitly recited "a set of source identifiers." Applicants' common sense definition is further supported by the specification where the term "set" is repeatedly used in reference to a plurality of items. For example, the term "set" is used to refer to a plurality of intermediate servers, which are shown in Figure 1C as being a plurality of servers. *See, e.g.*, Application, Figure 1C ¶ 84 ("a set of intermediate servers 158") Thus, Applicants' proposed interpretation is consistent with the specification as it would be interpreted by one of ordinary skill in the art. *See*, MPEP § 2111, *citing In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827 (Fed. Cir. 2004). In addition, Applicants' proposed interpretation is consistent with the "ordinary and customary meaning" that would be provided by any dictionary evidence which would confirm that the plurality of a term is denoted by the suffix "s" at the end of the term. If there is any reputable extrinsic evidence that supports the Examiner's proposed interpretation here, Applicants would request that it be provided. However, based on Applicants' review, Applicants' proposed interpretation is consistent with the specification and with the common and accepted meaning of the terms "fragments" and "source identifiers."

2. The Cited Art Does Not Meet The Properly Interpreted "Set of Fragments" And "Set of Source Identifiers" Requirements

As explained above, the broadest reasonable interpretation of the "set of fragments" and "set of source identifiers" terms that is consistent with the specification (and confirmed with any

dictionary evidence) refers to a plurality of items, so that the cache is searched to identify a "set" or plurality "of fragments associated with a set of source identifiers" that are not in the cache, and then the "set" or plurality "of source identifiers" are sent in the first request message. These requirements are simply not met by Daugherty's disclosure or the disclosure of any of the other cited references or "Official Notice" relied upon by the Examiner. Accordingly, Daugherty does not anticipate the present invention's claimed scheme for determining when a plurality of fragments are not cached, and then sending a first request message comprising the plurality of source identifiers associated with the missing fragments. *See, e.g.*, claims 1 and 12. Accordingly, Applicants respectfully request that the anticipation rejections be withdrawn and that the claims be allowed. To the extent that each of dependent claims 2-3, 6-7, 9-10, 13-14, 17-18, 24-25, 28-29, and 31-32 each include the recited "set of fragments" and "set of source identifiers" requirements by virtue of their dependency from claims 1, 12, and 23, Applicants respectfully submit that a *prima facie* case of obviousness has not been established showing that all the claim limitations are taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). As explained above, the broadest reasonable interpretation of the "set of fragments" and "set of source identifiers" terms that is consistent with the specification refers to a plurality of items. This requirement is simply not met by Daugherty's disclosure, either alone or in combination with the various combinations with "Official Notice," RFC 1341 and Donohue asserted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the obviousness rejections because the Examiner has not established a *prima facie* case of obviousness.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

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